



BOOK REVIEW: TRANSFORMATIVE LEARNING THROUGH PLAY: ANALOGUE GAMES AS VEHICLES FOR EDUCATIONAL INNOVATION

Jeremy Roberts

Abstract

A review of *Transformative Learning Through Play: Analogue Games as Vehicles for Educational Innovation*, which offers valuable insights into how games can address the limitations of traditional education and learning through games-based learning, affective and experiential play, sustainability, and collaboration.

Keywords

book review, analog games, transformative learning, games-based learning, affective learning, experiential learning, pedagogy, education, play

Transformative Learning Through Play: Analogue Games as Vehicles for Educational Innovation by Sara Rye, Micael Sousa, and Carla Sousa, New York: Routledge, 2025. 247 pages, hardcover, ISBN: 9783031785221

Rye, Sousa, and Sousa offer a timely and thorough contribution to the field of game-based learning (GBL), addressing the urgent need for pedagogical approaches suited to the complexities of the Anthropocene. The book critiques traditional linear and abstract educational paradigms as insufficient for preparing learners to navigate “wicked problems,” or issues that are “difficult or impossible to solve due to incomplete, contradictory and changing requirements.”¹ Chapter one positions analogue GBL as a transformative pedagogy rooted in systems thinking (understanding how parts of a whole interact), affective learning, and sustainability, arguing that traditional models often ignore the contextual and relational dimensions of learning.²

¹ Horst Rittel and Melvin Webber, “Dilemmas in a General Theory of Planning,” *Policy Sciences* 4, no. 2 (1973): 12.

² Sara Rye, Micael Sousa, and Carla Sousa, *Transformative Learning Through Play: Analogue Games as Vehicles for Educational Innovation* (Routledge, 2025), 9-10.

The authors distinguish analogue from digital games, highlighting the former's tactile, imaginative, and socially interactive experiences that support relational and holistic learning. Analogue games, those played with physical components such as cards, boards, and dice, offer opportunities for learners to engage collaboratively, test ideas, and reflect in real time. Students, through simulations, engage with layered problems, developing critical thinking, adaptability, and collaboration. The authors also propose a simple triadic model centered on experience, meaning, and context to guide effective GBL design in which active participation is crucial, students engage in decision-making aligned with experiential learning theory,³ emphasizing that knowledge emerges from doing rather than passive listening. Additionally, the authors highlight the importance of designing complex games that tackle ethical dilemmas, ambiguity, and critical thinking, fostering "resilience, adaptability and a growth mindset."⁴ Effective GBL design must confront challenges like inclusivity, assessment validity, curricular integration, and teacher preparedness.

The text offers readers a substantial theoretical backbone, expertly synthesizing empirical and theoretical literature. Huizinga's concept of the "magic circle," a metaphor describing the space where the normal rules of reality are suspended and replaced by the shared rules of play, is addressed in educational design.⁵ However, the ontological foundation of play, Huizinga's notion of *homo ludens*, or "the playing human," is largely ignored. Games and play both enhance active, experiential learning.⁶ Games are defined as "structured, interactive, rule-based, goal-oriented and competitive" activities with mechanics and feedback⁷ that support creativity, collaboration, and cognitive growth. Play, by contrast, is spontaneous, intrinsically motivated, and exploratory, emphasizing self-expression and creativity in a supportive environment.⁸ In simpler terms, games provide structured challenges, while play allows for open-ended exploration, both of which are vital for learning. Rules define boundaries, encourage fairness, and establish a coherent gameplay experience.⁹



Figure 1: The book cover of *Transformative Learning Through Play*.

³ John Dewey, *John Dewey, The Essential Writings* (Harper and Row, 1977).

⁴ Rye, Sousa, and Sousa, *Transformative Learning Through Play*, 20.

⁵ Johan Huizinga, *Homo Ludens: A Study of the Play-Element in Culture* (Routledge, 1980).

⁶ See for example Dewey, 1977 as well as Manuel Freire et al. "Game Learning Analytics: Learning Analytics for Serious Games," *Learning, Design, and Technology*, (2016): 1–29, https://doi.org/10.1007/978-3-319-17727-4_21-1; Jean Piaget, *The Origins of Intelligence in Children*, Translated by M. Cook (W. W. Norton & Company, 1952); David A. Kolb, *Experiential Learning: Experience As The Source Of Learning And Development* (Prentice-Hall, 1986); and Lev Vygotsky, *Mind in Society: The Development of Higher Psychological Processes* (Harvard University Press, 1978).

⁷ Vicky Matatou et al. "Game-Based Learning in Higher Education Using Analogue Games," *International Journal of Film and Media Arts* 8, no. 1 (2023): 36. See also James Paul Gee, *What Video Games Have to Teach Us About Learning and Literacy* (St. Martin's Griffin, 2003) and Katie Salen and Eric Zimmerman, *Rules of Play: Game Design Fundamentals* (The MIT Press, 2004).

⁸ Brian Sutton-Smith, *The Ambiguity of Play* (Harvard University Press, 1997): 37. See also Huizinga 1980 and Mihaly Csikszentmihalyi, *Flow: The Psychology of Optimal Experience* (Harper & Row, 1990).

⁹ Roger Callois, *Man, Play, and Games* (University of Illinois Press, 2001). See also Salen and Zimmerman 2004.

GBL's motivational power is explained through an application of motivational theory, specifically Self-Determination Theory,¹⁰ emphasizing autonomy, competence, and relatedness. These three needs refer to a learner's sense of control over their choices (autonomy), their feeling of capability (competence), and their connection with others (relatedness). Though games are often autotelic, pursued for their own sake, they can be harmonized with extrinsically motivated learning objectives.¹¹ Self-Determination Theory explains how external motivations can become internalized, allowing learners to eventually find intrinsic value in educational tasks. In practical terms, when a student initially plays a game for a grade or requirement but comes to enjoy the challenge itself, extrinsic motivation transforms into intrinsic motivation. The key lies in designing games that align intrinsic enjoyment with extrinsic goals. Games foster "active learning, metacognition [thinking about one's own thinking] and critical thinking" and are linked to major educational theories from behaviourism [learning through reinforcement] to sociocultural perspectives [learning through social interaction and cultural context].¹² Analogue games, the authors contend, contribute to education through multi-log reasoning (examining multiple perspectives), political simulations, tactical decisions, role-play, and experiential learning.¹³ The book also emphasizes the unique pedagogical value of analogue games due to their tangible nature, cards, dice, boards, pieces, which engage sensory, motor, and social processes in learning. Their interactive nature builds networks and enhances collaboration, although the naturally dialogic (conversation-based) nature of analogue gaming is regrettably not explored in any depth.

Chapter four advances the TEGA project as a model for harmonizing educational goals and gameplay mechanics. TEGA, short for Training the Educators to Facilitate the Teaching and Assessment of Abstract Syllabus by the Use of Serious Games, integrates cybernetic control systems (feedback-based regulation mechanisms in learning environments),¹⁴ the challenge-skill balance central to flow theory (the state of deep focus and enjoyment),¹⁵ and the Learning Mechanics–Game Mechanics (LM–GM) framework,¹⁶ which maps gameplay actions to learning outcomes. It also draws from Bloom's Taxonomy and Kolb's experiential learning model.¹⁷ As a high school educator interested in game design, I found this model particularly actionable because it provides a clear bridge between classroom objectives and game mechanics. The authors underscore the importance of narrative and thematic coherence to avoid ludonarrative dissonance (a mismatch between a game's story and its mechanics) and call for games to be assessed through iterative playtesting, feedback loops, and alignment with learning outcomes. In motivational design, this manifests as goal-oriented systems, feedback loop, and a system that detects disengagement and adjusts difficulty, support, or feedback to restore motivation

Chapter five is a highlight, arguing for analogue game design as an accessible entry point for educators. To apply GBL effectively, the authors note, educators should document games using simplified Game Design Documents (GDDs), including the overarching learning goals, core

¹⁰ Richard M. Ryan and Edward L. Deci, "Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions," *Contemporary Educational Psychology* 25, no. 1 (2000): 54–67. <https://doi.org/10.1006/CEPS.1999.1020>.

¹¹ Csikszentmihalyi, *Flow*, p. 71.

¹² Rye et al, *Transformative Learning Through Play*, 62.

¹³ Sara I. de Freitas, "Using Games and Simulations for Supporting Learning," *Learning, Media and Technology* 31, no. 4 (2006): 343–358. See also Gee 2003.

¹⁴ Wim Westera, "On the Cybernetic Arrangement of Feedback in Serious Games: A Systems-Theoretical Perspective," *Education and Information Technologies* 20, no. 1 (2015) 57–73. <https://doi.org/10.1007/s10639-013-9267-7>

¹⁵ Csikszentmihalyi, *Flow*.

¹⁶ Sylvester Arnab et al. "Mapping Learning and Game Mechanics for Serious Games Analysis," *British Journal of Educational Technology* 46, no. 2 (2014): 391–411. <https://doi.org/10.1111/bjet.12113>

¹⁷ Kolb, *Experiential Learning*.

mechanics and decisions, feedback loops, narrative, player numbers, game duration, where the game is played, interface and physical components, and structural format (competitive, cooperative, etc.). The authors advocate starting with pre-existing games before “modding,” that is, modifying existing games to fit new learning goals and eventually designing and prototyping original games. This step-by-step process aligns with experiential learning and constructivist pedagogy, which both emphasize learning through hands-on creation and reflection. The text suggests tools such as game design flashcards with mechanisms to help students build games on a canvas. The authors also outline major game design frameworks such as MDA (Mechanics, Dynamics, and Aesthetics),¹⁸ DPE (Design, Play, Experience),¹⁹ and Schell’s Elemental Tetrad,²⁰ a model that identifies story, mechanics, technology, and aesthetics as the four cornerstones of game design. Each is connected to educational design principles, providing teachers with concrete methods for linking gameplay to learning. These inclusions enrich the pedagogical conversation by grounding game-based learning in established ludological theory (the academic study of games and play), not merely in classroom practice. The text also offers an overview of practical assessment which can be conducted through tracking player progression through in-game metrics, external assessment which can include surveys, debriefings, exams or embedded assessment which integrates performance evaluation within the game.

Drawing on critical theorists, the final chapter frames analogue games as cultural artefacts that can either reinforce or resist dominant ideologies. Intersectionality is central; referring to how overlapping identities such as race, gender, and class shape experiences of power and marginalization,²¹ though the absence of empirical narratives from marginalized players slightly undermines the impact. The section offers concrete recommendations for inclusive design and critiques superficial gamification that replicates inequities, warning against games that unintentionally reinforce the same hierarchies they aim to challenge. While the book could benefit from deeper integration of ludological (game-centered) and semiotic (meaning-centered) theory, for instance, Caillois’ distinction between *paida* (free play) and *ludus* (structured play), it nonetheless offers a compelling, praxis-oriented framework. Educators are encouraged to build game literacy, engage in iterative and co-constructive design (developing games collaboratively with students and peers), and cultivate participatory learning environments. In sum, *Transformative Learning Through Play* is a richly theorized and practical resource for scholars, educators, and designers alike. It bridges theory and practice with intellectual rigor and pedagogical pragmatism, making a significant contribution to game-based learning literature. Even for readers outside formal education, such as independent designers or enthusiasts, the book offers valuable insights into how play can be used not just to teach content, but to transform how people think, feel, and connect through learning.



Jeremy Roberts (he/him), B.A., B.A. (Hon(s)), B. Ed., M. Ed., is a Manitoban educator in his tenth year and a third year PhD student in the Faculty of Education at the University of Manitoba. He

¹⁸ Robin Hunicke, Marc LeBlanc, and Robert Zubek, “MDA: A Formal Approach to Game Design and Game Research.” *AAAI Workshop—Technical Report* (2004): 1722–1726.

¹⁹ Brian M. Winn, “The Design, Play, and Experience Framework,” in *Handbook of Research on Effective Electronic Gaming in Education*, ed. Richard E. Ferdig (IGI Global, 2009), 1010–1024.

²⁰ Jesse Schell, *The Art of Game Design: A Book of Lenses* (CRC Press, 2008).

²¹ Kimberle Crenshaw, “Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics.” *University of Chicago Legal Forum* 1989, no. 1 (1989): 139–167.

incorporates ludological practices in his classroom to provoke critical thinking, intrinsic motivation, and dialogical relations. He recently completed his Master's thesis on using the role-playing game *Dungeons and Dragons* as an interruption to the curriculum-as-plan. The hermeneutical phenomenological approach found that the collective imaginative role-playing game, *Dungeons and Dragons*, can offer an experiential forum for players to explore identity dialogically, to counter dominant narratives of neo-colonialism and neo-liberalism, and to engage in a just and reconciliatory arena. Curriculum is co-constructed between teacher and student and must achieve a balance between the curriculum-as-plan and curriculum as lived experience. His latest research publications have focused on motivational theories. His PhD will explore motivational theories in game-based, arts-based, and drama-based learning.